

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



535595

(43) International Publication Date  
29 July 2004 (29.07.2004)

PCT

(10) International Publication Number  
WO 2004/064171 A1

(51) International Patent Classification<sup>7</sup>: H01L 41/04

(21) International Application Number:

PCT/JP2003/016822

(22) International Filing Date:

25 December 2003 (25.12.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2003-005037

10 January 2003 (10.01.2003)

JP

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(81) Designated States (*national*): CN, US.

(84) Designated States (*regional*): European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR).

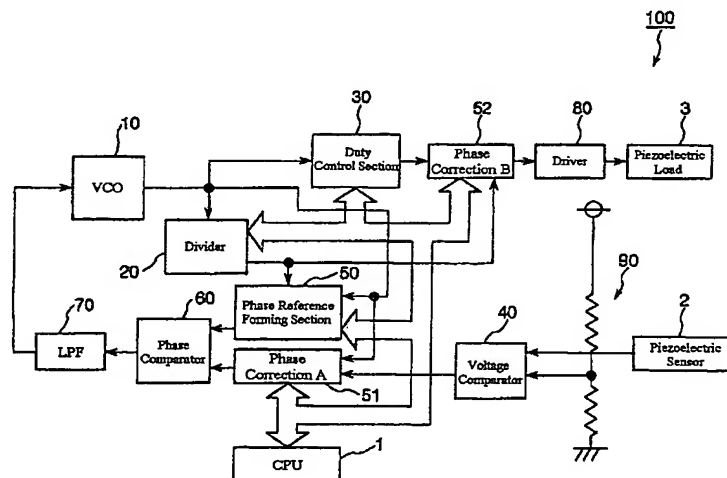
Published:

— with international search report

— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A RESONANCE CONTROL APPARATUS FOR A PIEZOELECTRICAL DEVICE BASED ON PHASE SENSITIVE DETECTION



(57) Abstract: A resonance control apparatus 100 includes a VCO 10 which generates a reference signal having a predetermined frequency, a divider 20 which divides the predetermined frequency of the reference signal, a phase reference forming section 50 which delays a phase of the divided signal for a predetermined interval, a voltage comparator 40 which compares a voltage of the output signal from a piezoelectric sensor 2 for detecting the driving state of a piezoelectric load 3 in synchronization with the driving of the piezoelectric load 3 with a predetermined voltage, a phase comparator 60 which compares the phase of the output signal from the voltage comparator 40 with the phase of the output signal from the phase reference forming section 50, and a duty control section 30 for controlling a duty ratio of the drive signal supplied to the piezoelectric load 3 based on the reference signal.